



TO STUDY SEED GERMINATION PERCENTAGE OF BRINJAL BY USING TRICHODERMA SPECIES

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ABSTRACT:

The Present investigation was carried out at kada on brinjal to determine the seed germination percentage of brinjal by using *Trichoderma species*. The efficiency of Bio-control means in controlling seed borne fungal diseases by using one *Trichoderma species*. Four different hybrid varieties of Brinjal and one wild varieties of Brinjal planted in pot for experimental work in Botany garden. The seed were purchased in various company i.e Ankur, Panchganga, Arnav. Mahyco and wild variety. The seed germination in Ankur is 70%, Panchganga 80%, Arnav 90%, Mahyco 92% germination were seen as compare to wild and control variety.

Key Words: - Seed germination, *Trichoderma*, Hybrid varieties, Brinjal

INTRODUCTION:

Brinjal (*Solanum melongena* L.) belongs to the family Solanaceae and is known under the botanical name. It is affected by several diseases, which do not control the plants to grow and yield to the best of genetic potential. Various disease management methods have been implemented to combat and eradicate pathogenic fungi. These include cultural, regulatory, physical, chemical and biological methods. In that situation Bio-control offers a good choice to grows to control the disease avoid the pollution Biological control of plant disease is suggested as on alternative to chemical control (Cook, 1977) and is considered as a cost effective and an environmental eco-friendly technique. Humus an organic rich soil of valley is flavoured to flourish the bioagents easily can control the diseases. Infected omestic antagonistic are most virulent strains to the pathogens (Dohroo, 2001) because of their persistent capability under soil and local climate conditions.

MATERIAL AND METHOD:

The practical work is done in the laboratory as well as in pot culture in botanic garden three

hybrid varieties of seed and one wild variety taken for the study of seed borne fungi on seed germination of Brinjal, Ankur, Panchganga, Mahyco, Arnav and wild variety of each of 100 seeds were sown in pot. The seed are treated with *Trichoderma* Species. The germination percentage of seed Mahyco is more than that of others. The seed health test is done by standard method (ISTA, 2001). The seed borne fungal pathogen associated with seeds was observed by binocular microscope by the key of Mathurand Kongsdal (1994). BAU- Biofungicide (*Trichoderma* based preparation Hossain (2011) was collected from diseases resistance laboratory.

The germination percentage of hybrid varieties is more than that of wild variety by using the *Trichoderma speces* to control the pathogen of diseases. The height of stem, length of leaf treated plants is large than of control plants. Thus, it is reported that least but similar prevalence of the fungi was recorded in the varieties tested.

RESULT AND DISCUSSION:

The effect of *Trichoderma* species on seed germination were studied by taking four different hybrid varieties and one control. The control have

used as surface sterile by distil water. The seeds were soaked overnight in cultural filtrate and distil water (control). The seed germination in mahyco is highest than that of others. Highest impacts were seen on the seed germination of local or control variety. It was found that local and Ankur variety was seen to be more sensitive for *Trichoderma*.

The plant length improved with the increased in the dose of fungus bio control agents such as *Trichoderma viride* and *Trichoderma harzianum*. The plant height was observed in pot NO 1 with 2 gminoculums of bio control agents *Trichoderma viride* and *Trichoderma harzianum*. It was followed by plants treated with 2.0 gm 1.5gm and 1.0 gm of inoculum as compared to untreated which shows lowest plant growth. Bhat, etal (2003), reported that bio control agent *Trichoderma viride* and *Trichoderma harzianum* to stimulate of brinjal plant as compared to the uncontrol plants.

Effect of the fungi on germination of Brinjal seed of four hybrid varieties presented in the table. Significantly the highest germination and growth rate was recorded more in Pot No. 1 as compared to other. This is due to the Bio control of *Trichoderma viride* and *Trichoderma harzianum*.

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Effect of *Trichoderma viride* on seed germination of Brinjal

Variety	Treatment	Germination % after	
		10 days	20 days
Ankur	<i>T. viride</i>	80.7%	90%
Panchganga	<i>T. viride</i>	70.9 %	82%
Arnav	<i>T. viride</i>	70 %	70.7%
Mahyco	<i>T. viride</i>	75 %	92%
Wild (control)	-	40%	42%